

For Immediate Release

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Outstanding Melter Production

AIKEN, S.C. (March 9, 2011) – With the Savannah River Remediation (SRR) LLC's Defense Waste Processing Facility (DWPF), it's all about numbers:

- 12 million pounds of glass, or over 3100 canisters, poured since operations began in March 1996, a milestone achieved in February
- 35 million curies of radioactivity safely immobilized
- Two melters have done the work to date, with a third melter ready to go

"DWPF is an awesome machine in the environmental cleanup world," said Dave Olson, SRR President and Project Manager. "I am extremely pleased with the performance of this facility."

DWPF is the largest radioactive waste glassification plant in the nation. It converts the liquid nuclear waste currently stored in underground tanks at the Savannah River Site (SRS) into a solid glass form suitable for safe, long-term storage. By immobilizing the radioactivity in glass, DWPF reduces the risks associated with liquid waste at SRS and prepares the waste for permanent disposal.

At the heart of the DWPF is the melter, which weighs 68.5 tons (including vessel, frame and components). To date, the production rate for the melters has been outstanding. Melter 1 poured 1,339 canisters (1996-2002), while melter 2 to date has poured 1,745 canisters (2003-present).

The melters were originally designed to last for a minimum two years. Due to the robust design of the DWPF facility and the melters, the type of waste processed and the successful implementation of innovative design improvements, the life of the melters have been extended.

Innovations included the redesign and installation of elements that improved the melter pour rate and necessary improvement for ongoing cleaning and maintenance, which allows the melter to continue operating without outages. The deployment of a pour stream viewing camera monitors the glass stream from the control room and the inclusion of a remote water leak sealing system to seal leaks in the copper piping of the melter have added to the successful operation of the glassification process.

By safely extending the melter's productive life, SRS has saved millions in taxpayer dollars and remains on schedule to empty waste tanks.

Melter 2 has been enhanced by adding equipment that injects argon gas bubbles into the DWPF melter. This enhancement improves the heat transfer in the melt pool and keeps the molten glass at a more uniform temperature which increases the melt rate and allows for higher production rates. This technology has increased the production of glassified, or vitrified, waste by 50 percent.

"The production rate of this melter is very impressive, and I anticipate that there will be increased canister productivity over time – saving time and money – as we meet our cleanup goals," said Terrel Spears, Assistant Manager for Waste Disposition Project, U.S. Department of Energy (DOE) Savannah River Operations Office.

The third melter has been purchased and assembled and is now stored onsite. When the decision is made to replace melter 2, it is estimated that it will take four months to remove the old melter, install the new one, test it and return to normal operations. All operations are conducted remotely to protect workers from radiation.

SRR is the SRS's Liquid Waste contractor. SRS is owned by DOE. SRR is composed of personnel from a team of companies led by URS with partners Bechtel National, CH2M Hill and Babcock & Wilcox. Critical subcontractors for the contract are AREVA, Energy Solutions and URS Safety Management Solutions.

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